

CLAIMS:

What is claimed is:

- 1 1. A data networking protocol comprising:
- 2 one or more control commands including one or more control commands selectively
- 3 employed to establish, manage and tear-down a communication session by and between elements
- 4 of a data network; and
- 5 one or more attribute-value pair(s) (AVP), selectively employed by a network element to
- 6 define one or more parameters of an accompanying control command, the AVPs including one
- 7 or more mobility management AVPs to facilitate exchange of mobility information between at
- 8 least a subset of the network elements of the data network participating in a point-to-point
- 9 component of the communication session.
- 1 2. A data networking protocol according to claim 1, wherein the mobility management
- 2 attribute-value pair(s) include an attribute value pair denoting whether an incoming call request
- 3 is a new call or a handoff.
- 1 3. A data networking protocol according to claim 1, wherein the mobility management
- 2 attribute-value pair(s) include an attribute-value pair for each of the one or more deterministic
- 3 element and/or random element comprising a communication session identifier.
- 1 4. A data networking protocol according to claim 3, wherein the mobility management
- 2 attribute-value pair(s) include a COOKIE AVP to communicate the deterministic element of the

communication session ID between one or more elements of the point-to-point communication session.

5. A data networking protocol according to claim 3, wherein the mobility management attribute-value pair(s) include a K_n AVP to communicate the random element of the communication session ID between one or more elements of the point-to-point communication session.

6. A data networking protocol according to claim 1, wherein the mobility management attribute-value pair(s) include an authentication AVP selectively invoked by one or more of the network elements participating in the point-to-point communication session to authenticate one or more network elements during a handoff of a communication session from one network element to another network element.

7. A data networking protocol according to claim 6, wherein the authentication AVP is employed by at least a subset of point-to-point communication session network elements to authenticate an identity of a subscriber unit initiating handoff of a communication session from one servicing basestation to another servicing basestation.

8. A data networking protocol according to claim 1, wherein the mobility management attribute-value pair(s) include a certification AVP selectively invoked by a basestation element of the point-to-point communication session to obtain a security certificate from a network element to authenticate the basestation to requesting subscriber(s).

1 9. A data networking protocol according to claim 8, wherein the CERT AVP is selectively
2 invoked by the basestation to a network access server (NAS), which solicits an updated
3 certificate from a third-party certification agency on behalf of and for delivery to the basestation.

1 10. A machine accessible storage medium comprising a plurality of executable instructions
2 which, when executed by an accessing machine, incorporate at least a subset of the mobility
3 management AVP's of claim 1 into a communication stack of the accessing machine.

1 11. A communication signal generated by a network element participant to a point-to-point
2 communication session, the communication signal comprising a data networking protocol
3 according to claim 1, wherein the data networking protocol includes one or more mobility
4 management attribute-value pair(s) enabling mobility management among and between two or
5 more network elements associated with the point-to-point communication session.